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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,265	08/28/2000	Chih-Yuan Chang	LUCENT-01500	6764

28960 7590 12/17/2003

HAVERSTOCK & OWENS LLP  
162 NORTH WOLFE ROAD  
SUNNYVALE, CA 94086

EXAMINER
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NGUYEN, HANH N

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/649,265

**Applicant(s)**

CHANG ET AL.

**Examiner**

Hanh Nguyen

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Application filed on 8/28/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-22, 25-36 and 39-41 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 23, 24, 37 and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-4 . 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-36 and 39-41 are rejected under 35 USC 103(a) as being unpatentable over **Montpetit** (US Pat. No. 6,366,761 B1) in view of **Prieto, Jr. et al.** (US Pat. No. 6,381,228 B1).

In claim 28, **Montpetit** discloses a ground terminal requesting slots representing a portion of bandwidth to satellite unit (user node requesting a portion of bandwidth). The satellite unit receives the request, assigns the requested portion of bandwidth if the satellite has sufficient bandwidth (a hub transmitting / receiving requests and assigning the portion of the requested bandwidth). The bandwidth assigned is based upon priority status of ground terminal such as user with higher priority status is assigned first (prioritizing user requests). See Abstract.

**Montpetit** does not disclose the priority of users is based upon quality of service standard.

**Prieto, Jr. et al.** discloses a user transmitting request for time slot to a satellite (a hub). The satellite receives the request, decides whether to grant, deny, or delay the request based on the service and price class (quality of service standard) of the user. See Abstract. Therefore, it would have been obvious to one ordinary skill in the art to add the feature of granting the request based upon quality of service into the satellite of **Montpetit** so that users with higher priority status is allocated with bandwidth first.

In claim 29, 30, 34 and 35, the limitation of this claim has been addressed in claims 1 and 28.

In claims 31-33, **Montpetit** does not disclose a percentage value is assigned to each of the slotted multiple access mode; the sum of the percentage value is 100%, the percentage value is a dynamically changing value. **Prieto, Jr. et al.** discloses each user requesting slot is reserved a fraction of available bandwidth (a percentage value is assigned to each of the slotted multiple access mode). See col.10, lines 15-20. User one has 50% of the bandwidth, users 2 &3 has 25% of the bandwidth each (sum of the percentage value is 100%). See col.10, lines 40-45. The percentage of the bandwidth may be changed in accordance with rate, network load (the percentage value is a dynamically changing value). See col.10, lines 45-65. Therefore, it would have been obvious to one ordinary skill in the art to modify the **Montpetit** by allocating users requests to fractions of available bandwidth.

In claim 36, the limitation of this claim has been addressed in claims 9 and 22.

In claim 39, the limitation of this claim has been addressed in claim 12.

In claims 40 and 41, the limitations of these claims have been addressed in claims 13 and 14..

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, 7, 8, 15, 16, 20 and 21 are rejected under 35 USC 102(e) as being anticipated by **Wright et al.** (US Pat. No. 6,240,083 B1).

In claims 1, 2, 3, 7, 8, 15, 16, 20 and 21, **Wright et al.** discloses a multiple access wireless network comprising base station and subscribers (See Fig.4). The base station receives requests for packet transfer from the subscriber, provides contention mode and reservation mode access to the subscriber (scheduling algorithm in wireless network utilizing an adaptive contention scheduling scheme). See Abstract & col.13, line 62 to col.14, line 10.

Claims 4-6, 9, 12-14, 17-19, 22 and 25-27 are rejected under 35 USC 103(a) as being unpatentable over **Wright et al.** (US Pat. No. 6,240,083 B1) in view of **Prieto, Jr. et al.** (US Pat. No. 6,381,228 B1).

In claims 4, 5, 6, 17, 18 and 19, **Wright et al.** does not disclose a percentage value is assigned to each of the slotted multiple access mode; the sum of the percentage value is 100%, the percentage value is a dynamically changing value. **Prieto, Jr. et al.** discloses each user requesting slot is reserved a fraction of available bandwidth (a percentage value is assigned to

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each of the slotted multiple access mode). See col.10, lines 15-20. User one has 50% of the bandwidth, users 2 & 3 has 25% of the bandwidth each (sum of the percentage value is 100%). See col.10, lines 40-45. The percentage of the bandwidth may be changed in accordance with rate, network load (the percentage value is a dynamically changing value). See col.10, lines 45-65. Therefore, it would have been obvious to one ordinary skill in the art to modify the **Wright et al.** by allocating users requests to fractions of available bandwidth.

In claims 9 and 22, **Wright et al.** does not disclose a queue in a weighted fair queue for generating contention slots. **Prieto, Jr. et al.** discloses scheduler 62 is a packet fair queue algorithm that stores reservation requests (a queue in a weighted fair queue). See col.9, lines 40-65. Therefore, it would have been obvious to one ordinary skill in the art to modify the **Wright et al.** by having a scheduler that queues reservation request in a fair weighted queue.

In claims 12 and 25, **Wright et al.** does not disclose the weighted fair queue to adjust the rate of generating contention slots automatically. **Prieto, Jr. et al.** discloses scheduler 62 is a packet fair queue algorithm that adjusts the service rates to allocate bandwidth to users (the weighted fair queue to adjust the rate of generating contention slots). See col.10, lines 40-50. Therefore, it would have been obvious to one ordinary skill in the art to modify the **Wright et al.** by having a scheduler that adjust the rate for allocating slots to users.

In claims 13, 14, 26 and 27, **Wright et al.** does not disclose the rate increases when the wireless network is lightly loaded and decreases when the wireless network is heavily loaded. **Prieto, Jr. et al.** discloses each user is allocated a bandwidth in proportion to its service rate. If all users are backlogged, then each user is given its service rate (rate decreases when the wireless network is heavily loaded). If some of users are idle, excess bandwidth is partitioned among the

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backlogged users in proportion to their relative rates (the rate increases when the wireless network is lightly loaded). See col.10, lines 57-65. Therefore, it would have been obvious to one ordinary skill in the art to modify the **Wright et al.** by having a scheduler that adjust the rate of allocating bandwidth to users in proportion to the network load.

### ***Allowable Subject Matter***

Claims 10, 11, 23, 24, 37 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claims 10, 23 and 37, the prior art does not disclose two new requests for generating contention slots are placed in the weighted fair queue when a collision occurs between two users.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ahmadi et al. (US Pat. No.5,384,777) discloses Adaptive Medium Access Control Scheme for Wireless LAN.

Hall (US Pat. No. 5,499,243) discloses Method and Apparatus for Coordinating Transfer of Information Between a Base Station and a Plurality of Radios.

Bauchot (US Pat. No. 5,970,062) discloses Method and Apparatus for Providing Wireless Access to an ATM network.

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Heide (US Pat. No. 5,677,909) discloses Apparatus for Exchanging data Between a Central Station and a plurality of Wireless Remote Stations on a Time Divided Communication Channel.

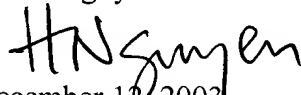
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Fax number: 703 872-9314

Hanh Nguyen

  
December 12, 2003